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USWEST

Kenneth T. Cartmell
Executive Director - Federal Regulatory

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May 24, 1999

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Mr. Dale Hatfield
Chief, Office of Engineering and Technology
Federal Communications Commission
445 - 12th Street, SW, 7th Floor
Washington, DC 20554

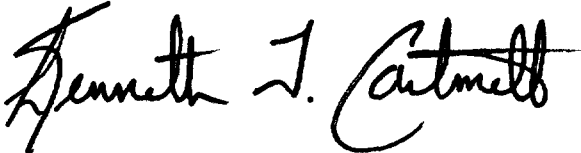
RE: CC Docket No. 91-273
Final Service Disruption Report, Northfield Radio, CO
NFLDCOQ2610

Dear Mr. Hatfield:

On April 24, 1999, U S WEST Communications ("USWC") experienced a service outage in Northfield Radio, CO. In accordance with the reporting rules, enclosed is USWC's Final Disruption Report for this outage.

Please contact me if you have questions concerning this report.

Sincerely,



Attachment

cc: Mr. Richard Smith
Mr. Robert Kimball

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List A B C D E

Final Service Disruption Report

Reporting Company: U S WEST ("usw")

Location of Disruption: Northfield Radio, CO

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1. Date and Time of Incident:

April 24, 1999 at 1530 MDT

2. Geographic Area Affected:

The affected communities in Colorado served by USW were: Buena Vista, Calhan, Cripple Creek, Fairplay, Green Mountain Falls, Leadville, Limon, Peyton, Salida and Woodland Park.

3. Estimated Number of Customers Affected:

35,913 USW customers were affected by the outage.

4A. Types of Services Affected:

911, Intraoffice, Interoffice, Inter-LATA, Intra-LATA, toll and Operator Services. Fairplay, Cripple Creek, Green Mountain Falls and Limon are remote switches and were without dial tone. The other communities listed went into Emergency Stand Alone configurations, which left them with Intraoffice capability.

4B. 911 Service Affected:

The Public Safety Answering Points (PSAPs) and/or Central Offices (COs) were isolated from the 911 tandem. Rerouting was not available for the COs served by remotes.

5. Duration of Outage:

Service was fully restored at 2137 MDT. Total duration of the outage was 6 hours and 7 minutes.

6. Estimated Number of Blocked Calls:

There were 93,383 blocked calls.

7A. Root Cause of the Incident:

The root cause of the incident was a hardware fault in the back up generator, following a commercial power failure.

Commercial power to the Northfield Radio site failed, initially, on April 23, 1999 at 1140 MDT. The generator assumed the load and ran, through additional intermittent commercial power failures, until 0851 MDT on April 24, 1999. By that time, a hold down clamp on the generator had worked loose while the engine was running, causing the timing to malfunction and the generator to fail.

The CO went to battery backup and technicians were dispatched at 0936 MDT by helicopter, to the site. The Northfield Radio site is located at an elevation of 9200 feet in Rampart Range. At 1200 MDT, bad weather forced the technicians to return to Denver.

The batteries depleted at 1530 MDT and service failed. Radio and Power Technicians were dispatched by snow cat with an estimated travel time of four hours.

The technicians arrived on site at 2115 MDT. The generator was restored and all service returned to normal operation by 2137 MDT.

7B. Name and Type of Equipment:

Standby Generator – International Harvester V401
60 kW generator with Onan transfer switch
Ericsson remote switches

7C. Specific Part of Network Affected:

Interoffice facility.

8. Method(s) Used to Restore Service:

The technicians manually restored the generator to service and put the radio equipment back into operation.

9. Steps Taken to Prevent Recurrence of Outage:

The following steps have been or will be taken to prevent recurrence of the outage:

- ◆ Investigation of the timing problem, which caused the generator to fail, is underway.
- ◆ A certified diesel mechanic put the engine and transfer switch through a total maintenance routine, on May 3, 1999. The switch and engine are now working correctly.
- ◆ A routine engine run was conducted on May 10, 1999.

A formal engineering complaint has been filed with the switch vendor regarding Emergency Stand Alone configurations. Pursuant to an earlier complaint from another RBOC, the problem has been escalated for resolution.

10A. Applicable Best Practice(s):

USW reviewed Network Reliability: A Report to the Nation, June 1993 and evaluated all recommendations and best practices by focus area.

There are no practices specific to conditions caused by adverse weather. Based on the root cause analysis, the most appropriate focus areas are:

Section B - Signaling Network Systems

6.1.1 - Root Cause Analysis

Section E – Power

6.2 – Standby Generators

6.4 – DC Plants

Section F - E-911 Systems

6.4 Network Management Center

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10B. Best Practice(s) Used:
Section B - Signaling Network Systems
6.1.1 - Root Cause Analysis

Section E - Power
6.2 - Standby Generators
6.4 - DC Plants

Section F - E-911 Systems
6.4 Network Management Center

10C. Analysis of Effectiveness of Best Practice(s):

Section B - Signaling Network Systems
6.1.1 - Root Cause Analysis

This recommendation is specific to Signaling Networks, but USW requires a root cause analysis on all significant network failures.

Section E - Power

6.2 - Standby Generators

This recommendation describes the Best Practices relative to the use of standby generators. USW has adopted these best practices.

6.4 - DC Plants

This recommendation describes the standard for battery reserve for both offices with stationary engines and those without. USW has adopted these practices and an additional battery string has been requested for the site.

Section F - E-911 Systems

6.4 Network Management Center

This recommendation describes the use of centralized network management centers to specifically monitor the 911 network as a unique and separate entity. USW has two Regional Service Assurance Centers with responsibility for monitoring the network through alarm indications. In situations such as this, every effort is made to identify and prioritize 911 circuits for priority restoration. In this situation, there was no reroute capability in the remote central offices.

Contact Person:

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